

Title (en)

METHOD AND APPARATUS FOR LOW COST AUDIO SCRAMBLING AND DESCRAMBLING

Title (de)

VERFAHREN UND EINRICHTUNG ZUR VERSCHLIERUNG UND ENTSCHLIERUNG VON AUDIOSIGNALE

Title (fr)

PROCEDE ET APPAREIL DE BROUILLAGE ET DE DESEMBROUILLAGE ECONOMIQUES DE SIGNAUX BASSE FREQUENCE

Publication

EP 0744105 A1 19961127 (EN)

Application

EP 94931915 A 19941018

Priority

- US 9411891 W 19941018
- US 14506693 A 19931026

Abstract (en)

[origin: WO9512922A2] Audio signals are descrambled by double sideband modulating the scrambled audio signal with a modulation carrier having a carrier frequency slightly above the highest audio signal present in the scrambled audio. This produces a double sideband signal that is passed through a low pass filter which in turn is modulated by a second carrier frequency lower than the first carrier signal by equal to the offset spectrum of the original scrambled signal. The first low pass filter nulls out any residual carrier from the first modulator that results from the intermodulation of the two modulation frequencies that would be audible at its descrambler output. The modulators used are low noise switch type modulators that improve the signal to noise ratio in the descrambled signal over the previously used linear modulators. The use of switch type modulators provides a lower cost device with improved performance. A companion scrambling device uses similar techniques to provide improved performance at a lower cost.

IPC 1-7

H04K 1/04

IPC 8 full level

H04B 15/00 (2006.01); **H04K 1/04** (2006.01)

CPC (source: EP)

H04K 1/04 (2013.01)

Citation (search report)

See references of WO 9512922A2

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB IE IT LI LU NL PT SE

DOCDB simple family (publication)

WO 9512922 A2 19950511; **WO 9512922 A3 19950713**; AT E175063 T1 19990115; AU 695981 B2 19980827; AU 8082894 A 19950523; CA 2181691 A1 19950511; CA 2181691 C 20001017; DE 69415555 D1 19990204; DE 69415555 T2 19990512; DK 0744105 T3 19990823; EP 0744105 A1 19961127; EP 0744105 B1 19981223; ES 2125494 T3 19990301; HK 1013747 A1 19990903; JP 3150700 B2 20010326; JP H10500259 A 19980106; KR 100249656 B1 20000315; MY 111488 A 20000630; NZ 275269 A 19980826; TW 311307 B 19970721

DOCDB simple family (application)

US 9411891 W 19941018; AT 94931915 T 19941018; AU 8082894 A 19941018; CA 2181691 A 19941018; DE 69415555 T 19941018; DK 94931915 T 19941018; EP 94931915 A 19941018; ES 94931915 T 19941018; HK 98114981 A 19981223; JP 51324395 A 19941018; KR 19960703240 A 19960614; MY PI19942827 A 19941025; NZ 27526994 A 19941018; TW 83111250 A 19941202